

protect public health during a time of declining availability of imported water. Regional initiatives to emphasize water conservation, reuse water through recycling, and desalination provide a drought resistant mix of water supply resources and increase the region's ability to reduce reliance on imported water supplies from outside the region.

As previously discussed, comparing the cost of Poseidon's previously preferred Design Alternatives 1 and 15 to Design Alternative 21 demonstrates that Design Alternative 21 has a comparable construction capital cost at \$66.1 to \$82.8 million and a projected operation and maintenance cost of \$5.8 to \$6.6 million per year. If the capital cost is paid off over a 30-year life of the intake structure, the per year cost of Design Alternative 21 including maintenance to consumers served by SDCWA would be between \$8.0 to 9.36 million per year. Table H.2-6 provides a summary of the costs only of Design Alternatives 1, 15, and 21 because those are the alternatives preferred by Poseidon, SDCWA, and the San Diego Water Board.

**Table H.2-6. Comparison Cost of Design Alternatives 1, 15, and 21**

Design Alternative	Construction Capital Cost Year	Operation and Maintenance Cost/year	Total Cost per Year
1, App. EEE to the ROWD	\$5.9 mill/year	\$4.8 mill/year	\$10.7 mill/year
15, App. EEE to the ROWD	\$6.2 mill/year	\$4.8 mill/year	\$11.0 mill/year
21, Sept. 13, 2018 meeting	\$5.7 to 7.1 mill/year	\$5.8 to 6.6 mill/year	\$11.5 to 13.7 mill/year

Benefits of seawater desalination come with associated risks and costs. Coastal waters affected by the operation of the CDP constitute a public trust resource held in common for public use and enjoyment, support beneficial uses, and serve vital environmental, social, and economic functions for society. The fundamental mission of the San Diego Water Board under the Porter-Cologne Water Quality Control Act is to protect the beneficial uses of these coastal waters for the benefit of current and future generations. Based on all of these considerations of social factors, Design Alternative 21 provides a reasonable balance of costs while serving the public interest in maximizing marine life protection.

#### **Design Alternative 21 Represents the Best Combination of Feasible Alternatives to Minimize the Intake and Mortality of Marine Life**

In making a Water Code section 13142.5(b) determination, the San Diego Water Board must independently evaluate a range of feasible alternatives for the best available site, design, technology, and mitigation measures to minimize intake and mortality of all forms of marine life and then determine the best combination of feasible alternatives to minimize intake and mortality of all forms of marine life (Ocean Plan chapter III.M.2.a(2).) Based on the foregoing analysis of feasible alternatives, the San Diego Water Board has determined that Design Alternative 21 provides the best combination of available site, design, technology, and mitigation measures feasible to minimize the intake and mortality of all forms of marine life while considering construction, operation, and maintenance costs.